HIGH CAPACITY I PRECISION I RELIABILITY

Plasser Diagnostics

Rail corrugation under control

Non-contact measurement of running surface corrugation

Plasser RailCorrugation

Plasser RailCorrugation is a non-contact measuring system for detecting and evaluating rail surface corrugation across different wavelength ranges. Based on optical chord measurement technology, it provides high-resolution corrugation data at regular spatial intervals, supporting rail condition monitoring, rail grinding planning, and maintenance verification according to EN 13231-3. Accurate localization, real-time analysis and automated reporting help infrastructure managers identify critical sections, reduce noise and vibration, and optimize maintenance interventions.

Your benefit:

- **High-speed corrugation measurement**
- **Early detection of rail corrugation**
- **Improved rail grinding planning**
- **More targeted maintenance interventions**
- **Reduced need for manual track inspections**
- **Unattended monitoring**
- **Compliant with EN13231-3**

High-resolution corrugation measurement

Plasser RailCorrugation continuously measures rail running surface irregularities using non-contact optical chord measurement. With configurable wavelength ranges from 10 mm to 1,000 mm, the system provides accurate corrugation amplitude data for both rails, supporting reliable assessment of short- and long-pitch longitudinal wear.

From measurement to decisions

Corrugation data can be processed in wavelength-specific bands and displayed as RMS or peak-to-peak values. This allows infrastructure managers to identify critical sections, define maintenance priorities, and plan interventions like rail grinding based on objective, localized surface condition data.

Measurement without speed constraints

The chord-based measurement principle, combined with high-speed laser sensors, enables measurements without requiring a minimum speed and at high vehicle speeds. This allows flexible integration on various vehicle platforms and reliable operation under varying operating conditions, while maintaining consistent spatial sampling throughout the inspection run.

Integrated reporting and maintenance workflow

Measurement results can be visualized in real time and translated into automated reports highlighting threshold exceedances and critical areas. Localized corrugation information supports post-run analysis, grinding verification, and long-term monitoring of rail surface degradation.

Plasser Diagnostics – Enabling smart infrastructure decisions.

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